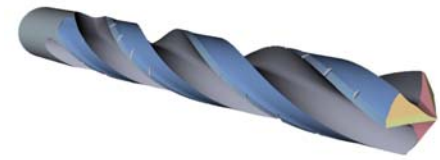
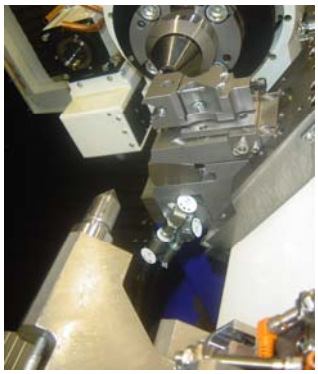
Tapered Drill Chipbreaker Ø18 Z3

A05-052





Special drill with smaller diameter at the tip. Flute grinding of HSS drills with conventional wheels is highly efficient when using the appropriate coolant pressure, a stable radius diamond roll for DXF-Dressing and the correct feed and partial increment. The stable grinding process is achieved with constant pressure while grinding the flute with a specially adapted steady rest. For cylindrical drills, the steady rest - displayed as a full CNC axis U - moves continuously shifted from the actual position of the flutewheel. For tapered drills, a fix U-position can be adopted.

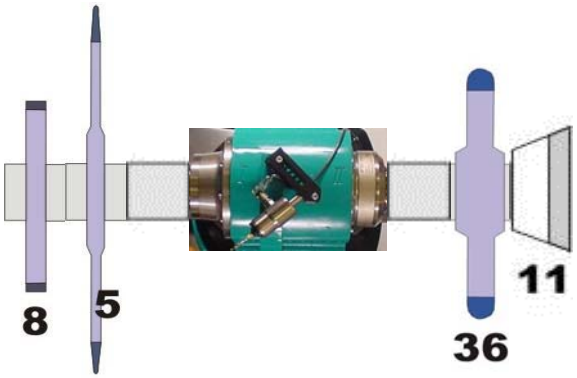
1. Cycletime for Production

Tool specifications Dia 18 mm, Z 3, Length 105 mm, Helix angle 30º, Taper angle 2.29º Material HSS									
Operations	Probe	Flute 1	Flute 2	Gashing	O.D.2	O.D.1	End 2	End 1	Prf Rough
Feed [mm/Min]	2000	900	1000	80	200	300	70	100	300
Power [kW]		4	2	2	1	1	1	1	2
Cutting feed [m/s]		18	16	32	24	24	24	24	32
Used wheels		36	36	7	8	8	11	11	5
Grinding time [s]	14	944	34	47	121	84	49	34	116
Total cycle time	24 Min 3								

The mentioned cycle times are indicative. The material to be ground, different grinding wheels or other coolants can influence the cycle times considerably.

2. Used Grinding Wheels

36 Ø150 DXF SG
7 Ø125 12V9 B126
8 Ø125 1A1 B126
11 Ø100 11V9 B126
5 Ø150 14EE1 B126



3. Machine and Software Requirements

Machines:	5 axes CNC grinders : CORVUS GDS, GEMINI DMR, Dressing Unit
Control:	Fanuc 31i
Coolant:	Synthetic Oil, pressure 12 - 18 bar
Software:	Quinto 5

responsible engineer: OP, 11.2.08

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